

Attachment 14
Environmental Management System (EMS) /
Environmental Compliance Management System (ECMS)
Implementation Protocol

Nucor will develop and implement an Environmental Management System/Environmental Compliance Management System (EMS/ECMS) that meets the criteria and schedule set out below.

A. Definitions

(These definitions apply only to the EMS provision of this Consent Decree.)

"Action Plan" shall mean a comprehensive plan for bringing each facility covered by this Consent Decree into full conformance with the EMS provisions specified in this Section and fully addressing all Audit Findings identified in the Audit Report.

"Audit Finding" means a written summary of all instances of significant non-conformance with the comprehensive EMS developed pursuant to this Section noted during the EMS Audit, and all significant areas of concern identified during the course of the audit that, in the Consultant Auditor's judgement, merits further review or evaluation for potential EMS, environmental, or regulatory impacts.

"Audit Report" means a report setting forth the Audit Findings resulting from the audit of a facility by the Consultant Auditor, which meets all of the requirements set forth in this Section.

"Consultant Auditor" means the independent third-party hired by Nucor and approved by EPA to conduct EMS Audits at Nucor Facilities, as required by this Section, and who meets the requirements set forth in Paragraph 11.

"Corrective Measures" means those measures or actions appropriate to bring the facility into full conformance with the comprehensive EMS required by this Section.

"EMS Audit" means an audit of the EMS at a Nucor facility to determine whether it conforms to (a) the "NEIC Compliance-Focused Environmental Management System Elements" contained in Attachment 15, and (b) Nucor's own specifications

for the EMS as contained in the facility's EMS Manual. Nucor may demonstrate through a matrix that each of the "Environmental Management System Elements" in the Attachment correlate to an element of the Nucor EMS.

"EMS Development Plan" means a facility-specific plan for developing the EMS at each Nucor facility, including a plan for developing documents and a schedule for implementing tasks, with cross-references to the "EMS Elements" contained in Attachment 15.

"EMS Manual" means a paper and/or electronic compilation of documentation and information for each facility's comprehensive EMS; the Manual may include a computer based integrated information system.

"Environmental Requirements" means all applicable Federal, State, and local environmental statutes and regulations, including permits and enforceable agreements between Nucor and the respective environmental regulatory agency(ies).

"Initial Auditor(s)" means individual(s) meeting the requirements of Paragraph 5 below, who are selected and/or contracted to perform the Initial EMS Review and Evaluation.

"Initial Review and Evaluation" means an initial audit and assessment of current environmental management practices to identify and assess potential gaps between current practices and at least the key EMS elements listed in Attachment 15.

"On-Site Contractor" to be covered by the program includes any contractor who has operations located at the facility or who provides services at the facility (for example, asbestos removal, demolition, painting, waste handling, and construction) which may be associated with significant environmental impacts.

B. Environmental Management System Requirements

1. Within 90 days of entry of this Consent Decree, Nucor shall develop an EMS Implementation Plan and submit the plan to EPA for review and approval pursuant to Section XII (Agency Approval). The EMS Implementation Plan shall identify individuals (by position) who are responsible for EMS

implementation at corporate and facility levels and their respective responsibilities and authorities. The plan shall also contain an implementation schedule with milestones for each Nucor facility covered. At a minimum, the milestones shall cover:

a. Completion of an Initial Review and Evaluation of the current environmental management practices at each Nucor;

b. Completion of initial plans for development of implementing documents and tasks (hereafter, EMS Development Plan) for each Nucor facility; and

c. A schedule for completing all EMS Development Plan work and tasks at each Nucor facility within 36 months after this Consent Decree is lodged.

2. Within 12 months of entry of this Consent Decree, Nucor shall develop and implement (through the first internal review and validation cycle) an EMS as a pilot at its facility in Berkeley/Hugar, South Carolina, and the Vulcraft facility at Norfolk, Nebraska. Nucor agrees that the Berkeley mill is generally representative of all Nucor EAF operations and that the Vulcraft facility in Norfolk, Nebraska, is generally representative of all Vulcraft plants so that the results of these pilots will have company-wide applicability. The purpose of each EMS shall be to promote compliance with all environmental requirements and enhance environmental performance. Each EMS shall, at a minimum, cover the key elements listed in Attachment 15 (NEIC Compliance-Focused Environmental Management System Elements).

3. Within 16 months after entry of this Consent Decree, Nucor will hold a workshop for appropriate personnel and managers from all facilities covered by this Consent Decree to share the experiences of the pilot EMSs and to enable more efficient implementation at the other steel mills and Vulcraft facilities.

4. Within 36 months of entry of this Consent Decree, Nucor shall implement a comprehensive EMS for each of the remaining Nucor facilities covered by this Consent Decree in accordance with each EMS Development Plan. The purpose of each EMS shall be to promote compliance with all environmental

requirements and enhance environmental performance. Shall be developed as described in the following paragraphs.

5. In accordance with the schedule established in the approved EMS Implementation Plan, Nucor shall conduct an Initial Review and Evaluation of current environmental management practices at each Nucor facility. A team of at least three (3) Initial Auditors shall conduct each initial Review and Evaluation. At least one auditor on the team will possess the education and experience qualifications for environmental auditors set out in ISO 14012. The team of Initial Auditors will also include one or more other reviewers qualified on the basis of technical or regulatory expertise to adequately evaluate the EMS. The following information concerning the team shall be included in the EMS Implementation Plan: (a) the name, affiliation and address of the Initial Auditor(s) selected by Nucor to conduct the Initial EMS Review and Evaluation; (b) evidence that one or more Initial Auditor(s) satisfies the qualification requirements of ISO 14012 (First edition, 1996-10-01); and (c) that the team conducting the Initial EMS Review and Evaluation, in composite, has a working process knowledge of the Nucor facility being audited or similar operations and has a working knowledge of applicable Federal and State environmental requirements. The results of the Initial Review and Evaluation shall be documented in a report prepared by the Initial Auditors and provided to Nucor and, at the Agency's request, to EPA.

6. Within 18 months after entry of the Consent Decree, Nucor shall prepare an EMS Development Plan for each facility, based on information gathered during the Initial Review and Evaluation and other pertinent information. Each EMS Development Plan shall follow a consistent format. Nucor shall submit each Development Plan to EPA within 30 days of its completion, and the Agency may submit any comments to be considered by Nucor within 60 days of receipt. The submittal shall be in both paper hard copy and a mutually agreeable electronic format.

7. Within 21 months after entry of this Consent Decree, Nucor shall begin to implement the EMS Development Plans at all Nucor facilities covered by the Consent Decree in accordance with the EMS Implementation Plan.

8. Within 24 months after entry of this Consent Decree, Nucor shall complete an EMS Manual for each facility covered by the Consent Decree. Each EMS Manual shall describe respective management systems, subsystems, and tasks in detail and shall be organized to clearly address the key elements of the Nucor EMS, which are correlated to the EMS elements listed in Attachment 10. Each manual shall describe how each of the activities and programs correlating to the elements in Attachment 15 is: (a) established as a formal system, subsystem or task; (b) integrated into ongoing department operations; and (c) continuously evaluated and improved.

9. In accordance with the schedule contained in the EMS Implementation Plan, but not later than 36 months after this Decree is entered with the Court, Nucor shall complete all work and tasks identified in the EMS Development Plans and implement comprehensive EMSs at all Nucor Facilities covered by this Consent Decree.

C. EMS Audit Program Requirements

10. Nucor shall develop and implement a two-year EMS Audit program to assess whether an effective EMS has been implemented at each Nucor facility covered by this Consent Decree. This audit program shall commence within 36 months of the entry of this Consent Decree, but no later than January 1, 2004, and all audits shall be completed by December 31, 2005.

11. Within 30 months of the entry of this Consent Decree, Nucor shall propose the names of at least one qualified independent auditing firm for EPA approval as the EMS Consultant Auditor team for Nucor facilities. A team of at least three Auditors shall conduct each EMS Audit. To be qualified, each audit team must meet the following criteria: (a) the auditors cannot have been involved in the Initial EMS Review and Evaluation; (b) at least the lead auditor must meet the qualification requirements of ISO 14012 (First edition, 1996-10-01); (c) the audit team in composite must have expertise and competence in the applicable regulatory programs under Federal and State environmental laws; (d) no audit team member may directly own any stock in Nucor or in any parent or subsidiary organization; (e) no audit team member may have any other direct financial stake in the outcome of the EMS Audit conducted pursuant to this Consent Decree; and (f) each audit team member must be capable of exercising the same independent judgment and discipline that a certified public accounting

firm would be expected to exercise in auditing a publicly held corporation. The Consultant Auditor team shall be paid by Nucor in an amount sufficient to fully carry out the provisions of this Consent Decree. If Nucor has any other contractual relationship or potential conflict of interest with the Consultant Auditor team, Nucor shall disclose to EPA such past or existing contractual relationships or conflict. EPA shall notify Nucor in writing of its approval or disapproval as expeditiously as possible.

12. If EPA determines that the proposed Consultant Auditor team does not meet the qualifications, or that past or existing relationships with the Consultant Auditor team would affect any Consultant Auditor's ability to exercise the independent judgment and discipline required to conduct the EMS Audit, such Consultant Auditor shall be disapproved and Nucor shall propose another Consultant Auditor within 30 days of Nucor's receipt of EPA's determination.

13. Nucor shall identify any and all site-specific safety precautions and/or training requirements for the Consultant Auditors, and shall ensure that the precautions are taken and requirements are met prior to conducting EMS Audits of Nucor facilities.

14. Nucor shall require a Consultant Auditor team to conduct an EMS Audit at each Nucor facility to evaluate the adequacy of EMS implementation, from top management down, throughout each major organizational unit at the facility, and to identify where further improvements should be made to the EMS. Each EMS Audit shall be conducted in accordance with ISO 14011 (First edition, 1996-10-01), using ISO 14010 (First edition, 1996-10-01) as supplemental guidance. Each audit team shall designate a qualified Lead Auditor. The Consultant Auditor team shall assess conformance with the EMS Manual and shall determine the following:

a. Whether there is a defined system, subsystem, program, or planned task for each EMS element listed in Attachment 15;

b. To what extent the system, subsystem, program, or task has been implemented, and is being maintained;

c. Adequacy of each Operation's internal self-assessment procedures for programs and tasks composing the EMS;

d. Whether Nucor is effectively communicating environmental requirements to affected parts of the organization, contractors and on-site service providers;

e. Whether further improvements should be made to the EMS;

f. Whether there are observed deviations from Nucor's EMS requirements or procedures; and

g. Whether continuous improvement is occurring.

15. Nucor shall require the Consultant Auditor team to develop and follow an EMS Audit Plan for each EMS Audit conducted pursuant to this Consent Decree, which incorporates the requirements in the above paragraph.

16. Designated representatives from EPA and other environmental regulatory agencies shall be permitted to participate in the EMS Audit as observers. Nucor shall make timely notification to designated regulatory contacts regarding audit scheduling in order to make arrangements for observers to be present. One or more Nucor representatives with a comprehensive understanding of the EMS will accompany the audit team to assist the team in understanding how the EMS works and applies to specific operations and employees. Other Nucor representatives may also participate in the on-site audits as an observer(s), but may not interfere with the independent judgment of the Consultant Auditing team.

17. Within 60 days of the completion of the on-site portion of each EMS Audit, Nucor shall direct the Consultant Auditor team to develop and submit an Audit Report concurrently to Nucor and EPA. The Audit Report shall present the Audit Findings and shall, at a minimum, contain the following information:

a. Audit scope, including the period of time covered by the audit;

b. The date(s) the on-site portion of the audit was conducted;

- c. Identification of audit team members;
- d. Identification of Nucor representatives and regulatory agency personnel observing the audit;
- e. The distribution for the EMS Audit Report;
- f. A summary of the audit process, including any obstacles encountered;
- g. Detailed Audit Findings, including the basis for each finding and each Area of Concern identified;
- h. Identification of any Audit Findings corrected or Areas of Concern addressed during the audit, and a description of the corrective measures and when they were implemented; and
- i. Certification by the Consultant Auditor that the EMS Audit was conducted in accordance with the provisions of this Decree.

18. If the Consultant Auditor team believes that additional time is needed to analyze available information or to gather additional information, Nucor may request that EPA grant the Consultant Auditor team such additional time as needed to prepare and submit the Audit Report. EPA's decision whether to grant additional time shall be final.

19. Follow-Up Corrective Measures. Upon receiving each Audit Report, Nucor shall conduct a root cause analysis of the significant Audit Findings, as appropriate, and investigate all significant areas of concern. Within 60 days of receiving the Audit Report for each facility, Nucor shall develop an Action Plan for fully addressing all significant areas of concern and expeditiously bringing the facility into full conformance with the EMS provisions of this Decree and the EMS Manual. The Action Plan shall include the result of any root cause analysis, specific deliverables, responsibility assignments, and an implementation schedule. Nucor shall implement the Action Plan in accordance with the schedules set forth therein.

D. EMS Reporting

20. Nucor shall submit semi-annual progress reports to EPA summarizing progress made in developing and implementing EMSs at each Nucor facility covered by this Consent Decree. Progress reports shall be submitted to EPA within thirty (30) days after the last day of June and December of each calendar year commencing in 2001 until all required EMS activities are completed.

21. The progress reports, as appropriate, shall contain a summary of how EMSs are being developed and implemented in accordance with this Section and shall include the following information for each Nucor facility:

a. Estimated number of procedures that require documentation in the EMS;

b. Number of procedures that have been documented and the unit operation they cover; and

c. Description of other tasks or activities related to EMS implementation completed during the reporting period.

22. The progress reports shall also contain information on the EMS Audits required by this Section. The progress reports, as appropriate, shall contain an EMS Audit schedule for the next six-month reporting period, indicating the month during which the EMS Audit will be conducted at each Nucor facility. The schedule may be revised by Nucor provided the required EMS Audits are conducted in accordance with this Consent Decree. The progress report shall list the dates and locations at which required EMS Audits were conducted during the reporting period, the names and affiliations of personnel who conducted each audit, and the date the Action Plan was approved by Nucor management. The progress report, as appropriate, shall also contain a copy of the certification by the Consultant Auditor, from audit reports completed during the reporting period, that the required audits were conducted in accordance with the provisions of this Decree.

E. ENVIRONMENTAL METRICS

23. Nucor shall collect data on the Environmental Metrics listed below for each Nucor facility on an annual basis for the purpose of measuring the impacts of implementation of the EMS. Within 90 days after entry of this Consent Decree, Nucor

shall propose detailed monitoring parameters and reporting format to EPA for review and approval. Any revisions required by EPA shall be incorporated by Nucor within 14 days of final communication by EPA. Environmental Metrics will be developed for the following:

a. Spills and Accidental Releases

Number, contents and volume or mass of internally reported, documented chemical (including petroleum) spills and accidental releases, and whether they exceed a state or federal Reportable Quantity.

b. Permit Exceedances

Number of instances when actual compliance monitoring data results exceed reporting limits established in applicable state or federal permits or standards.

c. Toxic and Pollutant Releases

Using 1999 as a base year, TRI, emission (air) and discharge (wastewater) loading data will be normalized to annual throughput or production. Releases to land will be further analyzed to account separately for slag and other materials (e.g., non-hazardous solid waste going to landfills).

d. Hazardous Waste Generation

Utilizing data from Biennial Reports and Hazardous Waste Manifests, volumes of hazardous wastes generated will be normalized to annual throughput or production.

e. Recycling

Utilizing TRI data and production records, (e.g., in-process materials, solid wastes, hazardous wastes, process water, or storm water) recycling rates will be normalized to annual throughput or production.

f. Water and Energy Usage

Consumption of electricity, thermal energy (e.g., natural gas, petroleum, etc.) and fresh water,

normalized to annual throughput or production and other factors (e.g., scrap grade).

F. EMS Reporting

24. Nucor shall submit semi-annual progress reports to EPA summarizing progress made in developing and implementing EMSs at each Nucor facility covered by this Decree. Progress reports shall be submitted to EPA within thirty (30) days after the last day of June and December of each calendar year commencing in 2001 until all required EMS activities are completed.

25. The progress reports, as appropriate, shall contain a summary of how EMSs are being developed and implemented in accordance with this Section and shall include the following information for each Nucor facility:

a. Estimated number of procedures that require documentation in the EMS;

b. Number of such procedures that have been documented and the unit operations they cover; and

c. Description of other tasks or activities related to EMS implementation completed during the reporting period.

26. The progress reports shall also contain information on the EMS Audits required by this Section. The progress reports, as appropriate, shall contain an EMS Audit schedule for the next six-month reporting period, indicating the month during which the EMS Audit will be conducted at each Nucor facility. The schedule may be revised by Nucor provided the required EMS Audits are conducted in accordance with this Consent Decree. The progress report shall list the dates and locations at which required EMS Audits were conducted during the reporting period, the names and affiliations of personnel who conducted each audit, and the date the Action Plan was approved by Nucor management. The progress report, as appropriate, shall also contain a copy of the certification by the Consultant Auditor, from audit reports completed during the reporting period, that the required audits were conducted in accordance with the provisions of this Decree.

27. The progress reports due within 30 days after the end of June, as appropriate, shall include the data or summaries of the data collected during the previous calendar year for the Environmental Metrics, as required by this Section.